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# Arthroscopic Bankart Reconstruction: Post-Operative Rehabilitation

Arthroscopic reconstruction of anterior instability requires a more gentle rehabilitation than open reconstruction.

## Phase I: 0 - 6 weeks

*This phase emphasizes gentle ROM recovery in certain planes only, retarding muscle atrophy while protecting healing tissues, and teaching of protective scapular mechanisms.*

<b>Immobilization</b>	3-4 weeks in immobilizer
<b>ROM</b>	<i>1-2 weeks:</i> Codman exercises in sling, gentle pendulums <i>3-4 weeks:</i> active-assist exercise, supine upright (cane/pulley), start in flexion, progress to abduction, <b>avoid external rotation</b> <i>4-5 weeks:</i> active ROM against gravity <i>6 weeks:</i> continue to limit external rotation to 0 degrees.
<b>Strengthening</b>	Glenohumeral isometrics in immobilizer, scapular exercises performed initially in sling - teach retraction/protraction, elevation/depression, upward/downward rotation while maintaining glenohumeral stability - progress to manually resisted exercises in sitting/supine/side-lying positions. Distal musculature exercises to tolerance.  At 5-6 weeks, can start glenohumeral limited arc dynamic resistive exercises: avoid long lever-arms and ER beyond 0°. Low resistance and high reps initially.
<b>Restrictions</b>	No aggressive inferior or anterior glenohumeral mobilization. No resistive overhead exercises. No external rotation beyond 0°.

## Phase II: 6 - 12 weeks

*This phase is designed to recover range of motion (attaining full external rotation may be delayed 2-4 weeks), increase strength, and facilitate neuromuscular control.*

<b>Immobilization</b>	Discontinued.
<b>ROM</b>	<p>6 weeks: begin allowing external rotation - appreciate end-feel, increase flexion 10°-15° weekly</p> <p>9 weeks: 30°-60° external rotation, 150°-180° elevation, start to progress to combined position of external rotation with abduction.</p> <p>12 weeks: full elevation, 60°-90° external rotation, more vigorous mobilization to combined position of external rotation/abduction.</p>
<b>Strengthening</b>	<p>Increase vigor of exercises incrementally, addressing both muscle isolation and synergy and emphasizing scapular and rotator cuff musculature. Manual resistance is used initially, with progression to isokinetic and isotonic exercises. Exercises are generally performed below 90° of elevation and modified prn:</p> <p><i>bench press</i>: hands in close, avoid touching chest with bar</p> <p><i>lat pulldown</i>: hands in close, pull in front of head, do not fully elevate</p> <p><i>seated row</i>: avoid excessive glenohumeral extension</p> <p><i>prone rotator cuff</i> (Blackburn) - keep arm below table level</p>
<b>Neuromuscular</b>	8 weeks: weight-bearing exercises, standing weight shifts, progress to hands and knees, rhythmic stabilization, gym ball; manually-resisted co-contractions, PNF patterns, biofeedback with mirrors/videotape/EMG
<b>Restrictions</b>	No loading in the combined position of external rotation and abduction

## Phase III: 12 - 16 weeks

*This phase increases the intensity and specificity of exercises and prepares for return to full activities.*

<b>ROM</b>	Achieve full ROM by 16 weeks - may include vigorous stretching and mobilization, if necessary.
<b>Strengthening</b>	High-load/low reps as indicated; isokinetic velocity spectrum; concentric/eccentric specificity; endurance.
<b>Neuromuscular</b>	Advanced closed-chain exercises on hands and toes (eg. ball, Profitter, rhythmic stabilization)

**Discharge at ~16 weeks. Delay 6-9 months for contact sports. Provide appropriate counseling for equipment, activities, positions, exercise program.**